

**WHAT IS CLAIMED IS:**

1 1. An organic light emitting diode (OLED) display, comprising:  
2 a back panel;  
3 a front panel substantially parallel to the back panel;  
4 an array of OLED pixels positioned between the front  
5 panel and the back panel; and  
6 a plurality of thermally conductive elements positioned  
7 between the OLED pixels and the back panel and  
8 distributed throughout the array of OLED pixels, the  
9 thermally conductive elements provide a path of low  
10 thermal resistance from the OLED pixels to the back  
11 panel.

1 2. The display of claim 1, wherein each OLED pixel comprises a  
2 plurality of OLED sub-pixel regions that emit different  
3 colors of light.

1 3. The display of claim 1, wherein the thermally conductive  
2 elements comprise solder joints.

1 4. The display of claim 3, wherein there is at least one  
2 solder joint positioned between each OLED pixel and the  
3 back panel.

1 5. The display of claim 4, wherein:  
2 each OLED pixel has at least one cathode contact; and  
3 a solder joint for each OLED pixel on the cathode contact  
4 between the OLED pixel and the back panel.

1 6. The display of claim 5, wherein:  
2 each OLED pixel has at least one anode contact; and

3 a solder joint for each OLED pixel on the anode contact  
4 between the anode contact and the back panel.

1 7. The display of claim 6, wherein at least a portion of the  
2 solder joints conducts electrical current to the OLED  
3 pixels.

1 8. The display of claim 1, wherein the array of OLED pixels is  
2 divided into a plurality of subsets of adjacent pixels.

1 9. The display of claim 8, wherein there is at least one  
2 thermally conductive element positioned between each pixel  
3 subset and the back panel.

1 10. The display of claim 9, wherein:  
2 each pixel subset includes an OLED pixel having at  
3 least one cathode contact; and  
4 a thermally conductive element for each pixel subset  
5 on the cathode contact between the pixel subset and  
6 the back panel.

1 11. The display of claim 10, wherein:  
2 each pixel subset includes an OLED pixel having at  
3 least one anode contact; and  
4 a thermally conductive element for each pixel subset  
5 between the anode contact and the back panel.

1 12. The display of claim 11, wherein at least a portion of  
2 the thermally conductive elements conducts electrical  
3 current to the OLED pixels.

1 13. The display of claim 1, wherein the back panel comprises  
2 a ceramic material.

1 14. The display of claim 1, further comprising an epoxy  
2 material to affix the front panel to the back panel such  
3 that the epoxy material occupies the space between the  
4 thermally conductive elements.

1 15. The display of claim 1, further comprising a heat fin  
2 coupled to the surface of the back panel opposite to the  
3 front panel.

1 16. The display of claim 15, further comprising a cooling fan  
2 to force airflow over the heat fin.

1 17. An OLED display, comprising:  
2 a back panel;  
3 a front panel substantially parallel to the back panel;  
4 an array of OLED pixels positioned between the front  
5 panel and the back panel, wherein the array of OLED  
6 pixels is divided into a plurality of subsets; and  
7 an array of solder joints distributed throughout the  
8 array of OLED pixels such that at least one solder  
9 joint is positioned between each pixel subset and the  
10 back panel, wherein the solder joints dissipate heat  
11 from the OLED pixels and at least a portion of the  
12 solder joints conduct electrical current to the OLED  
13 pixels.

1 18. The display of claim 17, wherein the back panel comprises  
2 a ceramic material.

1 19. The display of claim 17, wherein each OLED pixel  
2 comprises three OLED sub-pixel regions that emit different  
3 colors of light.

1 20. The display of claim 17, wherein the portion of the  
2 solder joints that conduct electrical current are  
3 electrically connected to at least one back panel  
4 interconnect.

1 21. The display of claim 17, further comprising a heat fin  
2 coupled to the surface of the back panel opposite to the  
3 front panel.

1 22. The display of claim 21, further comprising a cooling fan  
2 to force airflow over the heat fin.

1 23. A method for manufacturing an OLED display, comprising:  
2 providing an array of OLED pixels on a first surface of a  
3 front panel;  
4 forming cathode contacts over at least a portion of the  
5 OLED pixels and distributed throughout the array of  
6 OLED pixels;  
7 forming solder joints on each cathode contact; and  
8 mounting a back panel over the solder joints and  
9 substantially parallel to the front panel so that the  
10 solder joints provide a path of low thermal resistance  
11 from the OLED pixels to the back panel.

1 24. The method of claim 23, wherein each cathode contact is  
2 formed directly over a single OLED pixel.

1 25. The method of claim 23, wherein the solder joints are  
2 formed such that at least a portion solder joints provide  
3 electrical current to the OLED pixels.

1 26. The method of claim 25, wherein the portion solder joints  
2 that provide electrical current to the OLED pixels are  
3 electrically connected to at least one back panel  
4 interconnect.

1 27. The method of claim 23, further comprising forming anode  
2 contacts adjacent to at least a portion of the OLED pixels  
3 such that the anode contacts are evenly distributed  
4 throughout the array of OLED pixels.

1 28. The method of claim 25, further comprising forming solder  
2 joints on each anode contact throughout the array of OLED  
3 pixels.

1 29. The method of claim 23, further comprising filling the  
2 space between the solder joints with an epoxy material to  
3 affix the back panel to the front panel.